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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,265	11/29/2000	Ernst Eberlein	41000	3597
7590	04/19/2005		EXAMINER	
John E Holmes Roylance Abrams Berdo & Goodman Suite 600 1300 19th Street NW Washington, DC 20036			DEPPE, BETSY LEE	
			ART UNIT	PAPER NUMBER
			2637	
DATE MAILED: 04/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/673,265	EBERLEIN ET AL.	
	Examiner	Art Unit	
	Betsy L. Deppe	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 19 January 2005.  
 2a) This action is FINAL.                                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 25,27-33,36 and 38-44 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 25,28-33,36,40 and 41 is/are allowed.  
 6) Claim(s) 27 and 38 is/are rejected.  
 7) Claim(s) 38,39 and 42-44 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Response to Argument***

1. The objections and rejections in the last Office Action have been overcome by the response filed January 19, 2005.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it includes legal phraseology often used in patent claims (i.e. comprises). Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:  
on page 10, line 13, "symbol an a predetermined" should be "symbol and a predetermined";

on page 12, line 7, "Transformator" should be "Transform unit" (see page 11, lines 5-6); and

on page 12, line 16, there should be a comma after "demodulation."

Appropriate correction is required.

5. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because interlineations or cancellations made in the specification could lead to confusion and mistake during the issue and printing processes. See 37 CFR 1.125 and MPEP § 608.01(q).

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

***Claim Objections***

6. The following claims are objected to because of the following informalities:
  - on line 1 of claims 38 and 39, "further" should be inserted before "comprising";
  - in claim 42, line 3, "the" should be "an"; and
  - on line 2 of claims 43 and 44, line 2, "said received down-converted signal" should be "said down-converted signal" (see claim 36, lines 10-11).

Appropriate correction is required.

7. The listing of the claims does not include claims 1-22 with the proper status identifier. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
9. Claims 27 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The detailed description does not describe a method or apparatus comprised of the limitations recited in claims 25 and 36, respectively, in combination with the limitation recited in claims 27 and 38, respectively. According to the last paragraph on

page 16 through page 17, the weighting of the correlation values corresponds to the third embodiment shown in Figure 6 and uses equation 14 to determine the frequency offset. The equation recited in claims 27 and 38 corresponds to the embodiment shown in Figure 5 and does not apply the correlating step and correlator as recited in the last two lines of claims 25 and 36, respectively. Therefore, one skilled in the art is unable to make and/or use the claimed inventions of claims 27 and 38 since it is unclear how the weighting relates the equation in claims 27 and 38.

***Allowable Subject Matter***

10. Claims 25, 28-33, 36, and 39-44 are allowable over the prior art of record.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rohani (US Patent No. 5,594,757) teaches weighting a correlated output to determine frequency deviation. However, the it does not weight "corresponding values of said two portions with corresponding values of said two sequences" as recited in the last lines of claims 25 and 36.

Seki et al. (US Patent No. 5,602,835) discloses an OFDM synchronization demodulation circuit.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Wednesday and Thursday (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betsy L. Deppe  
Primary Examiner  
Art Unit 2637